AMENDMENTS TO THE SPECIFICATION

Please amend the specification as follows. No new matter has been added.

Please amend the paragraph beginning on page 5, line 1, as follows:

contact ~~32~~ 34 which constitutes the anode, and a platinum filament 33 which constitutes the cathode. In the solution, the charge can only be transported if at the electrolyte/semiconductor interface there is a passage of charge between an ion of the electrolytic solution 32, designated by the reference 35 in FIG. 2A, and positive ions 36 of the silicon substrate 31. This takes place by means of a chemical reaction that dissolves the anode, in the specific case the semiconductor substrate 31. As a consequence thereof pores 22 are developed in depth in the substrate 31 dissolving it partially.

Please amend the paragraph beginning on page 6, line 15, as follows:

Subsequently, in a step not shown in the figures, then, the magnetoresistive element 20 is provided with lateral contacts, similar to those shown in FIG. ~~2~~1, by means of a metallic evaporation process.

Please amend the paragraph beginning on page 7, line 4, as follows:

The structure of a spin valve magnetic device 110 according to the invention is shown schematically in FIG. 3. Said spin valve 110 comprises a plurality of stacked layers of different materials. This plurality of layers comprises, in particular, a substrate 114, for example a glass substrate, whereon is laid a growth layer 115, also called seed layer, obtained for example with a layer of tantalum, which acts as a seed for the growth of a permanent magnetic layer ~~111~~112.

The free magnetic layer ~~11~~ 111 is constituted by a soft magnetic material, such as an iron-nickel alloy, like permalloy, provided with a non permanent magnetisation. Said free magnetic layer 111 serves the purpose of orienting its magnetisation following the external magnetic field to be measured. Superiorly to the free magnetic layer 111 is placed a non ferromagnetic spacer layer 113.

Please amend the paragraphs beginning on page 8, line 4 and to page 9, line 5, as follows:

The spin valve 110 shown in FIG. ~~1~~ 3 is of the CIP (current in plane) type, i.e. to the spin valve, by means of a generator 119, is applied a current I that flows in planar fashion in the spacer layin the spacer layer ~~13~~ 113 and in the other layers of the spin valve 10. The spacer layer ~~13~~ 113 then is the layer that contributes most to determine the electrical resistance of the spin valve 10 in the absence of a magnetic field. It is also possible to have a CPP configuration (Current Perpendicular to Plane), in which the current I is forced to traverse vertically the stacked layers of the spin valve.

The spin valve ~~10~~ 110 shown in FIG. ~~1~~ 3 is of the CIP (current in plane), type, i.e. to the spin valve, by means of a generator ~~19~~119, is applied a current I that flows in planar fashion in the spacer layer ~~13~~ 113 and in the other layers of the spin valve ~~10~~110. The spacer layer ~~13~~ 113 then is the layer that contributes most to determine the electrical resistance of the spin valve ~~10~~ 110 in the absence of a magnetic field. It is also possible to have a CPP configuration (Current Perpendicular to Plane), in which the current I is forced to traverse vertically the stacked layers of the spin valve.

In the absence of an external magnetic field, the spin valve shown in FIG. ~~1~~ 3 is in ferromagnetic configuration, i.e. the free magnetic layer ~~11~~ 111 and the permanent magnetic

layer ~~12~~ 112 have the same direction of magnetisation. In the figures, the direction of the temporary magnetisation associated with the free magnetic layer 111 is indicated with an arrow and the reference MT, whilst the direction of the permanent magnetisation associated with the permanent magnetic layer 112 is indicated with an arrow and the reference MP. Thus in this case the spin valve 110 has high electrical conductivity, since the path of the electrons, designated by the reference "e" in FIG. 4 undergoes substantially no scattering inside the spin valve device 110.

Please amend the paragraph beginning on page 9, line 27, as follows:

The spin valve 120 shown in FIG. 5 is particularly suitable for a GMR sensor, so the spacer layer 113 is obtained with a composite mesoscopic structure, in which the nanoparticles 124 made of metal, but also possibly of ferromagnetic and/or dielectric and/or ceramic and/or semiconductor material, are dispersed in the ~~metallic~~ matrix structure 125 with a thickness ranging from a few angstrom to hundreds of nanometres. Such a structure of